

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No. MO-0082996

Owner: Kansas City Power & Light (KCPL)/Empire District Electric Co./
St. Joseph Light and Power

Address: 1201 Walnut Street, Kansas City, MO 64106-2124

Continuing Authority: Kansas City Power & Light (KCPL)
Address: 1201 Walnut Street, Kansas City, MO 64106-2124

Facility Name: KCPL - Iatan Generating Station
Address: 20250 Highway 45 North, Weston, MO 64098-0284

Legal Description: NW ¼, SE ¼, Sec. 31, T54N, R36W, Platte County

Receiving Stream: Missouri River (P)
First Classified Stream and ID: Missouri River (P)(00226)
USGS Basin & Sub-watershed No.: (10240011-050005)

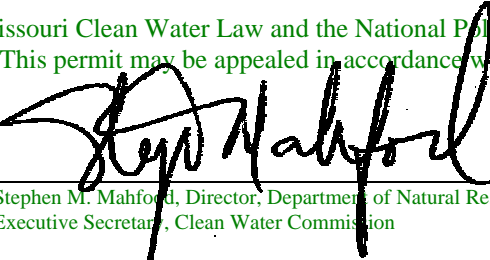
is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

FACILITY DESCRIPTION

See page 2

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

February 6, 2004
Effective Date


Stephen M. Mahford, Director, Department of Natural Resources
Executive Secretary, Clean Water Commission

February 5, 2009
Expiration Date
MO 780-0041 (10-93)

Jim Hull, Director of Staff, Clean Water Commission

FACILITY DESCRIPTION (continued)

Outfall #001 - Power Plant - #4911

Once through non-contact cooling water/pump bearing.
Design flow is 471 MGD.
Actual flow is 471 MGD.

Outfall #002

Activated sludge/aerobic digestion/sludge. Sludge is taken to the Kaw Point WWTP in Kansas City, KS by contract hauler for incineration. Actual flow exceeds design flow. Actual sludge production exceeds design sludge production.
Design population equivalent is 45.
Design flow is 4,500 gallons per day.
Actual flow is 5,041 gallons per day.
Design sludge production is 1.0 dry tons/year.
Actual sludge production is 1.3 dry tons/year.

Outfall #003

Outfall #002 effluent.
Plant wash-down/pretreatment blow-down/bottom ash/lip seal overflow/neutralization basin/steam blow-down/filter backwash/coal pile runoff/storm water runoff.
Design flow is 654,141 gallons per day.
Actual flow is 568,000 gallons per day.

Outfalls #007 & #008

Storm water runoff.
Design flow is 0.57 MGD.
Actual flow is dependent upon precipitation.

| | | | | | PAGE NUMBER 3 of 6 | |
|--|---------|----------------------------|-------------------|--------------------|--------------------------|---------------------|
| A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS | | | | | PERMIT NUMBER MO-0082996 | |
| The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below: | | | | | | |
| OUTFALL NUMBER AND EFFLUENT PARAMETER(S) | UNITS | FINAL EFFLUENT LIMITATIONS | | | MONITORING REQUIREMENTS | |
| | | DAILY MAXIMUM | WEEKLY AVERAGE | MONTHLY AVERAGE | MEASUREMENT FREQUENCY | SAMPLE TYPE |
| <u>Outfall #001</u> Flow | MGD | * | | * | once/week | 24 hr. total |
| Temperature - Intake | °F | * | | * | once/week | grab |
| Temperature - Effluent | °F | * | | * | once/week | grab |
| Thermal Discharge (internal energy increase) | BTU/day | 6.7 x 10 ¹⁰ | Note 1 | | once/week | calculated |
| Percent Thermal Exceedance | % | | Note 1 | | once/week | calculated |
| <u>Outfall #002</u> Flow | MGD | * | | * | once/month | 24 hr. total |
| Biochemical Oxygen Demand ₅ | mg/L | | 45 | 30 | once/month | 24 hr. composite |
| Total Suspended Solids | mg/L | | 45 | 30 | once/month | 24 hr. composite |
| pH - Units | SU | ** | | ** | once/month | grab |
| <u>Outfall #003</u> Flow | MGD | * | | * | once/month | 24 hr. total |
| Biochemical Oxygen Demand ₅ | mg/L | 65 | | 45 | once/month | grab |
| Total Suspended Solids | mg/L | 100 | | 30 | once/month | grab |
| Settleable Solids | mL/L/hr | 1.5 | | 1.0 | once/month | grab |
| Oil & Grease | mg/L | 20 | | 15 | once/month | grab |
| pH - Units | SU | ** | | ** | once/month | grab |
| Precipitation | inches | * | | * | once/day | 24 hr. total |
| <u>Outfalls #007 & #008</u> Flow | MGD | * | | * | once/quarter*** | 24 hr. estimate |
| Settleable Solids | mL/L/hr | 1.5 | | 1.0 | once/quarter*** | grab |
| Oil & Grease | mg/L | 20 | | 15 | once/quarter*** | grab |
| pH - Units | SU | ** | | ** | once/quarter*** | grab |
| MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE <u>April 28, 2004</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS. | | | | | | |
| B. STANDARD CONDITIONS | | | | | | |
| IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I & III</u> STANDARD CONDITIONS DATED <u>October 1, 1980</u> and <u>August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN. | | | | | | |

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

- * Monitoring requirement only.
- ** pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.0-9.0 pH units.
- *** Sample once per quarter in the months of January, April, July & October.

Note 1

- (a) If the permitted thermal limit is not exceeded, then no further calculations are necessary. Report as "0" for "percent thermal exceedance."
- (b) On any day that the BTU discharge exceeds the amount permitted for that outfall (see permit limits), the following calculation must be performed:

Actual river flow in CFS for that day * 0.25 * 5°F * 62 lb/ft³ * 3,600 sec/hr * 24 =
Actual BTU allowed.

- 1. If the above calculated amount of BTU is larger than the amount actually discharged, report as "0" for "percent thermal exceedance." If it is more than "0" proceed to #2 below.
- 2. If the above calculated amount of BTUs is smaller than the actual discharge, report the percentage of the exceedance.

% thermal =
$$\frac{\text{actual discharged BTU} - \text{calculated limit BTU}}{\text{actual discharged BTUs}} * 100$$

exceedance

- (c) A violation occurs if the actual BTU discharge is larger than that calculated using actual river flow.

C. SPECIAL CONDITIONS

- 1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
 - (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
 - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
 - (2) controls any pollutant not limited in the permit.
 - (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
 - (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.
- 2. This permit may (after due process) be modified, or alternatively revoked and reissued, to comply with any applicable sludge disposal standard or limitation so issued or approved under Section 405(d) of the Clean Water Act.
- 3. All outfalls must be clearly marked in the field.

C. SPECIAL CONDITIONS (continued)

4. The results of all daily monitoring shall be included in the quarterly discharge monitoring reports which are required to be submitted to the department's Kansas City Regional Office.
5. There shall be no discharge of polychlorinated biphenyl compounds.
6. Any pesticide discharge from any point source shall comply with the requirements of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (7 U.S.C. 136 et. seq.) and the use of such pesticides shall be in a manner consistent with its label.
7. Changes in Discharges of Toxic Substances

The permittee shall notify the Director as soon as it knows or has reason to believe:

- (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
 - (1) One hundred micrograms per liter (100 µg/L);
 - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
 - (4) The level established in Part A of the permit by the Director.
 - (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.
8. Report as no-discharge when a discharge does not occur during the report period.
 9. General Criteria. The following water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
 - (a) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
 - (b) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
 - (c) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
 - (d) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
 - (e) There shall be no significant human health hazard from incidental contact with the water;
 - (f) There shall be no acute toxicity to livestock or wildlife watering;
 - (g) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
 - (h) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

C. SPECIAL CONDITIONS (continued)

10. Use or Disposal of Ash from Power Plants

- (a) Disposal of ash is not currently authorized by this permit.
- (b) Closure of wastewater impoundments shall be in accordance with 10 CSR 20-6.010 (12).
- (c) This permit does not authorize off-site storage, use or disposal of ash in regard to water pollution control permits required under 10 CSR 20-6.015 and 10 CSR 20-6.200.
Beneficial use exemptions under solid waste and/or 10 CSR 20-6.010 (1) may apply.

11. Outfalls #007 and #008 correspond to Outfalls #00A and #00B from the application, respectively.

12. Sludge and Biosolids Use For Domestic Wastewater Treatment Facilities

- (a) Permittee shall comply with the pollutant limitations, monitoring, reporting, and other requirements in accordance with the attached permit Standard Conditions.
- (b) If sludge is not removed by a contract hauler, permittee is authorized to land apply biosolids. Permit Standard Conditions, Part III shall apply to the land application of biosolids. Permittee shall notify the department at least 180 days prior to the planned removal of biosolids. The department may require submittal of a biosolids management plan for department review and approval as determined appropriate on a case-by-case basis.